

测试技术

空间光强自动测试装置的研究

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摘要 通过对灯具空间光强测试方法的研究,提出了一种空间光强测试新方法。建立了灯具空间光强自动对中的数据模型,介绍了空间光强自动测试装置的组成和测试原理。借助二维扫描系统和专用测试软件绘制出空间光强的三维图形,从而可快速求出灯具x和y轴的光强分布曲线以及发散角,故可获得所需的测试信息,并可通过全过程测试得到更加丰富的测试信息及测试报告。最后给出将一投影灯置于离探测器5m处的测试结果,按文中所述测试原理测得的峰值光强为2634.4cd,发散角为15.25°。

关键词 [空间光强](#); [自助测试](#); [灯具](#); [投射灯](#)

分类号

Research on Automatical Measuring System for Spatial Light Intensity

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Abstract After investigations on the methods usually used in measuring the spatial light intensity of lamps, a new test method for spatial light intensity is proposed. A data model, which can automatically align the spatial light intensity of a lamp, has been established. The structure and principle of the system for automatically measuring the spatial light intensity are introduced. The three dimensional figures of spatial light intensity were drawn with a 2-D scanning system and a dedicated test software (Matlab). With the technology we can rapidly derive the light intensity distribution in x and y axes, and the divergence angle of the lamp. An example of measuring a projection lamp is given in details. The ideal results, among which the peak light intensity is 2634.4 cd and the divergence angle is 15.25°, are acquired in the experiment while a lamp is 5m away from the detector of the system.

Key words [spatial light intensity](#) [automatic test](#) [lamp](#) [projection lamp](#)

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